

FIG. 1A

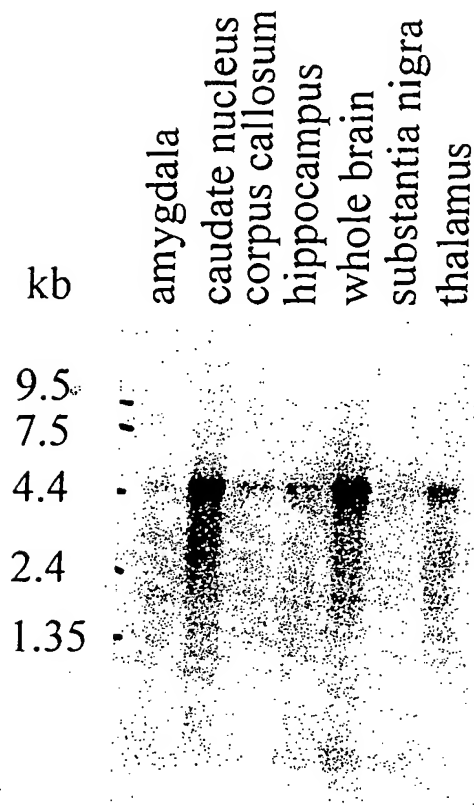
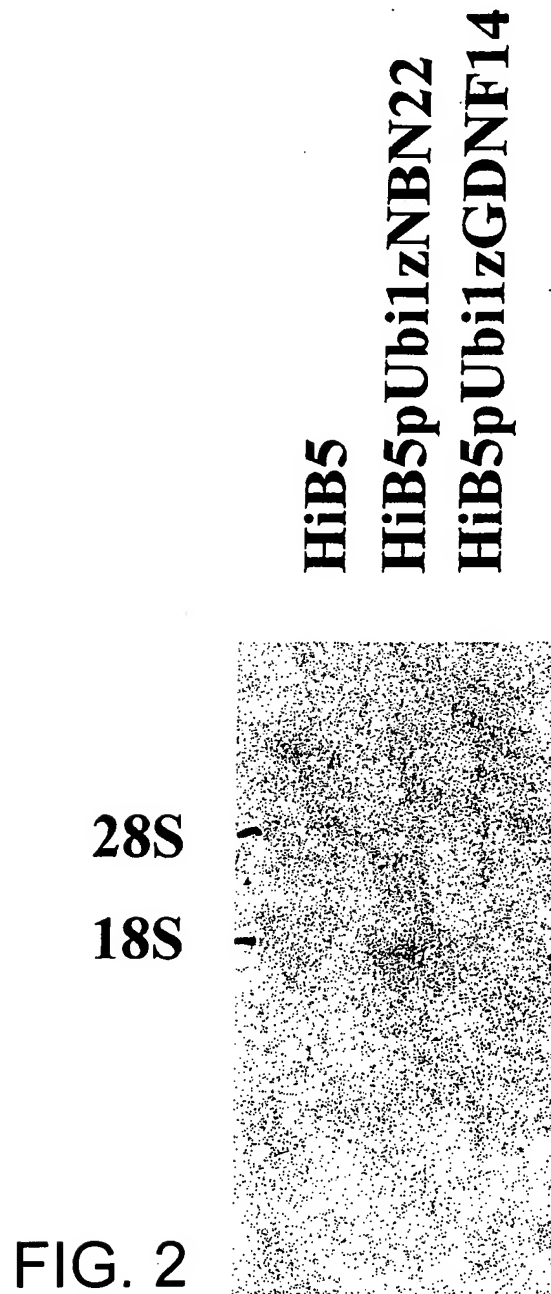


FIG. 1B



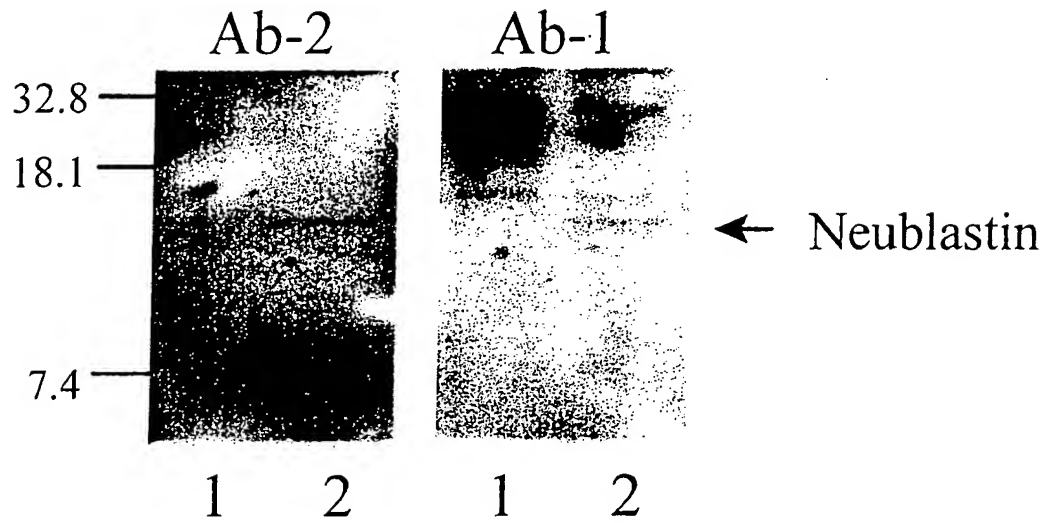


FIG. 3

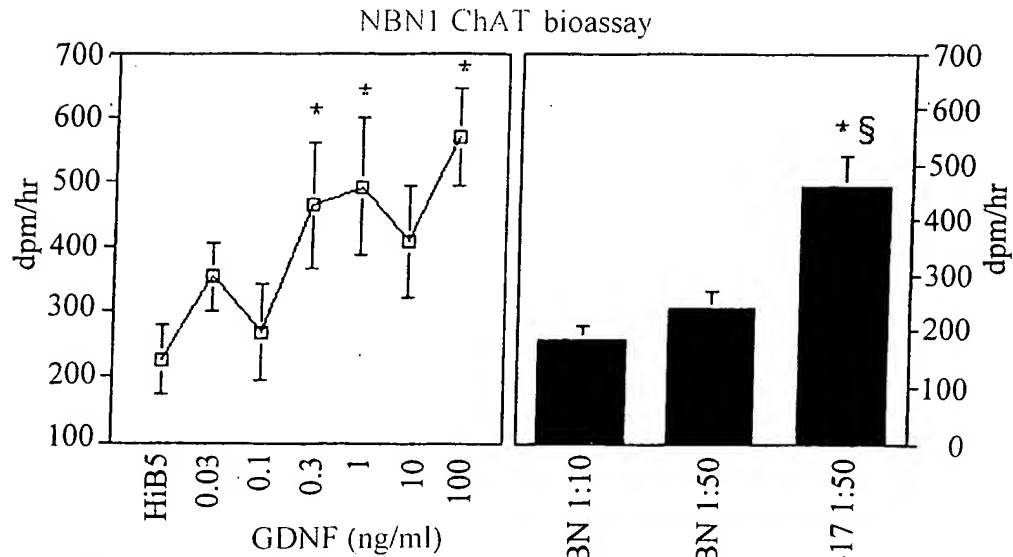


FIG. 4A

FIG. 4B

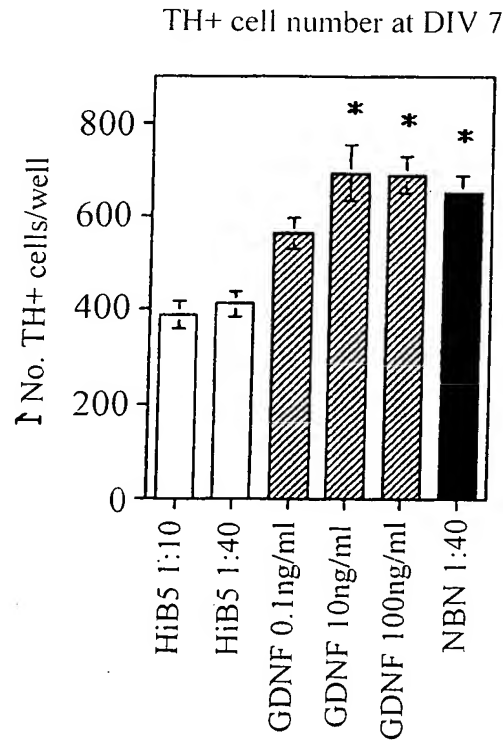


FIG. 4C

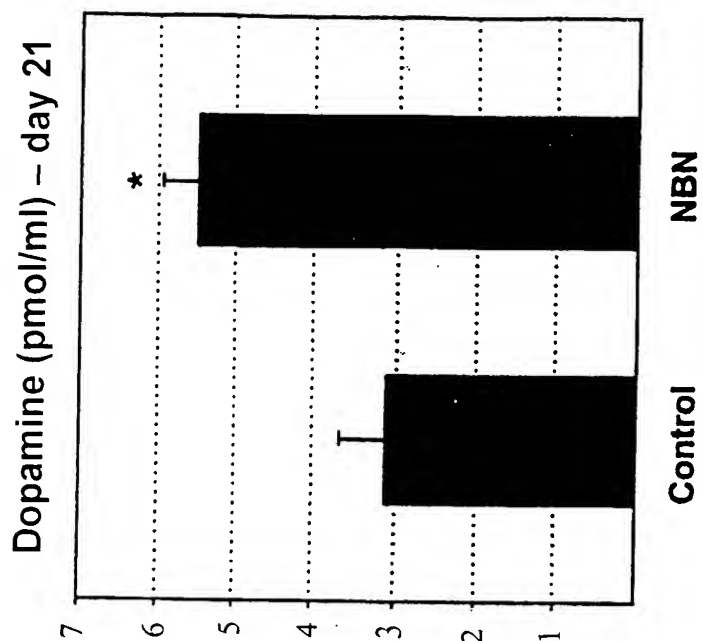


FIG. 5B

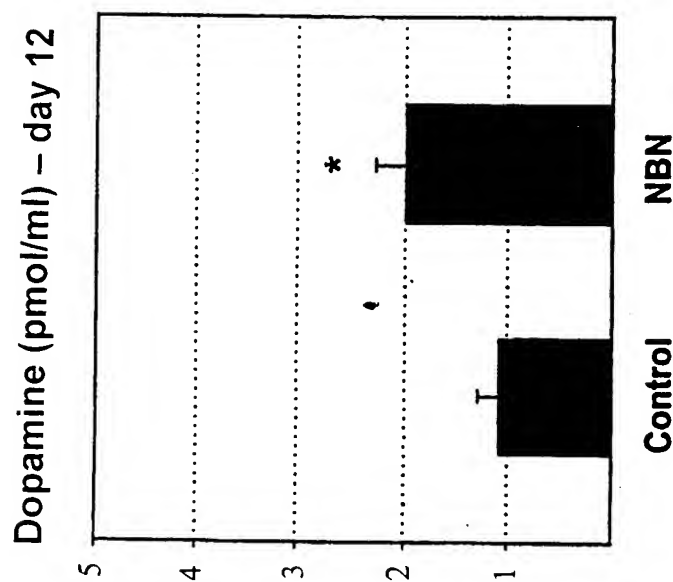
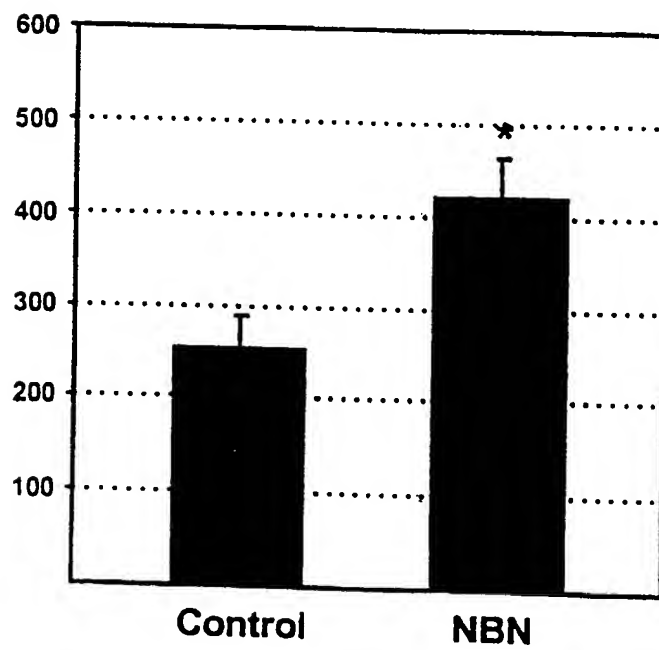
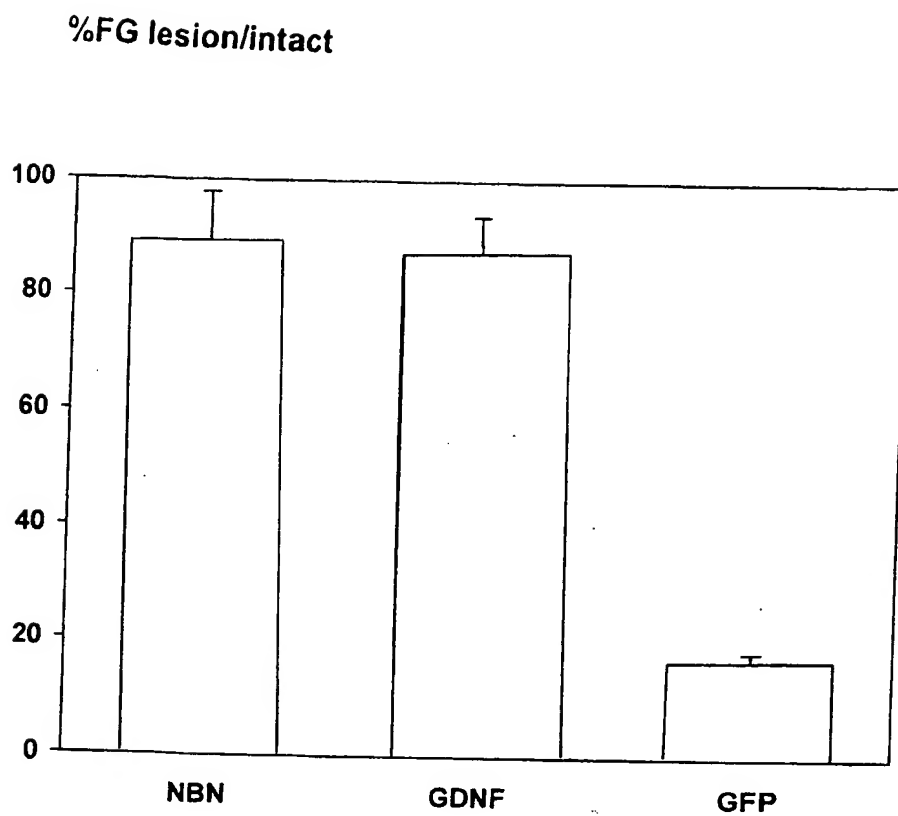


FIG. 5A

**TH-ir cells per culture**



**FIG. 5C**



**FIG. 6**

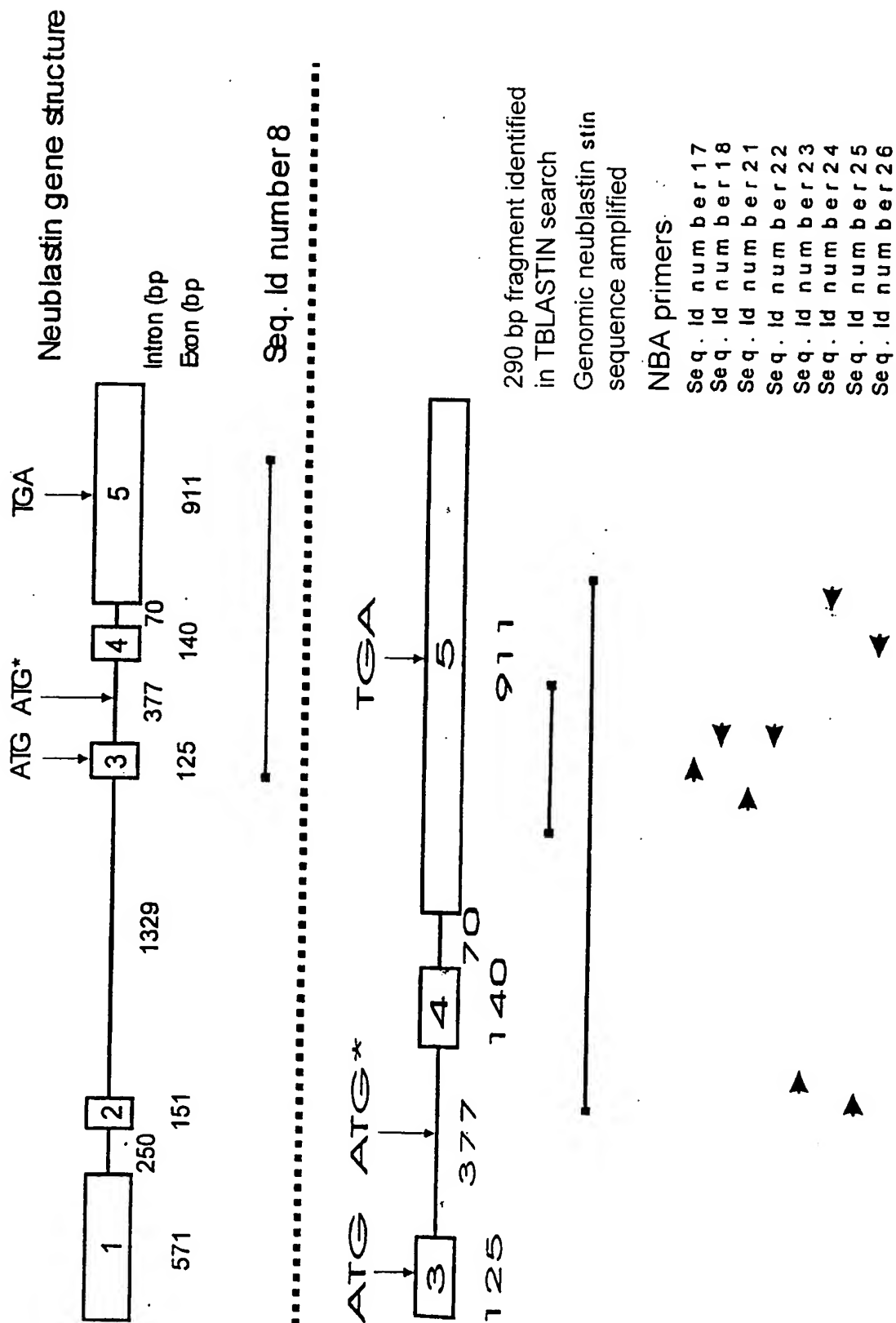


FIG. 7



Alignment of Neublastin primers used in Rapid-Screen with  
homologous regions in other GDNF ligands

5'-C CTG GCC AGC CTA CTG GG-3'	SEQ ID No 17
G CTG GCC CGG CTG CAG GG	persephin
G CTG CGA CGA CTG CGC CA	neurturin
A TTG AAA AAC TTA TCC AG	GDNF

5'-AA GGA GAC CGC	TTC GTA GCG-3'	SEQ ID No 18
TA GGC CAC GTC	GGT GTA GCG	persephin
AA GGA CAC CTC GTC	CTC GTA GGC	neurturin
AA CGA CAG GTC ATC	ATC AAA GGC	GDNF

conserved nucleotides shown in **bold**

FIG. 8

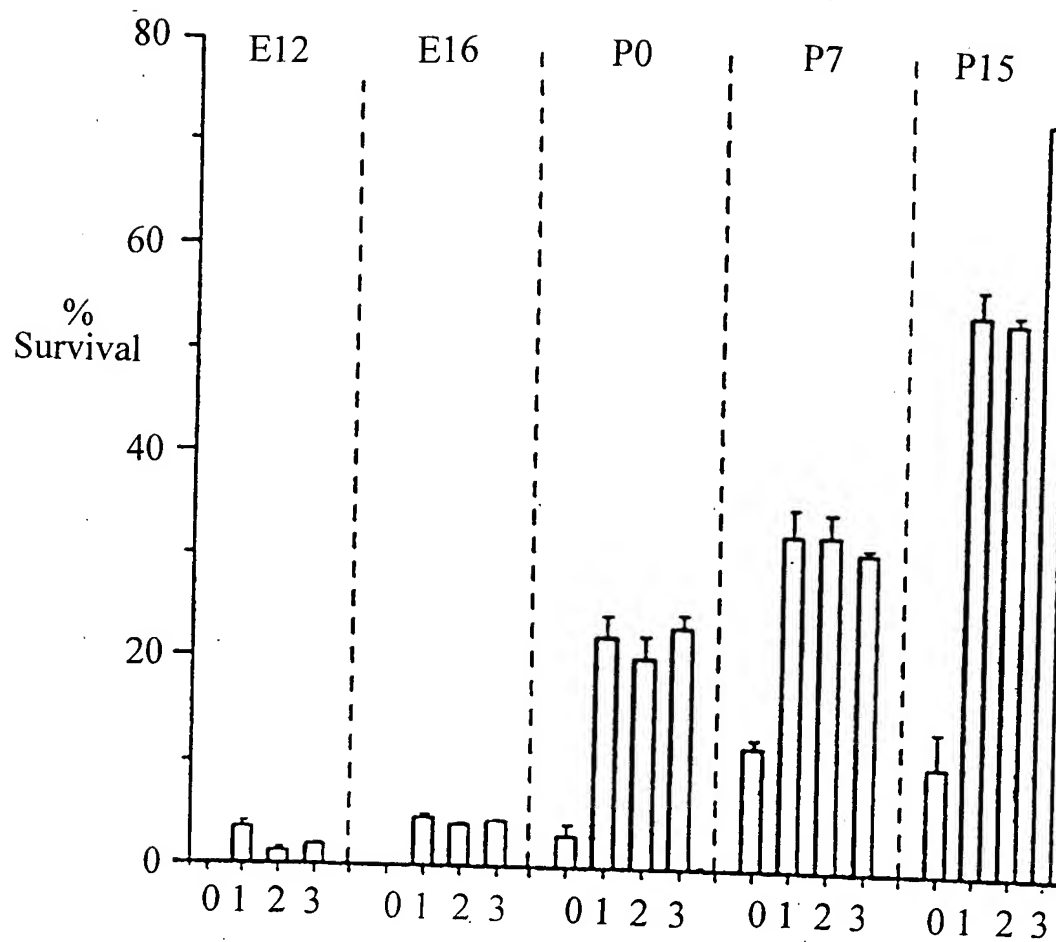
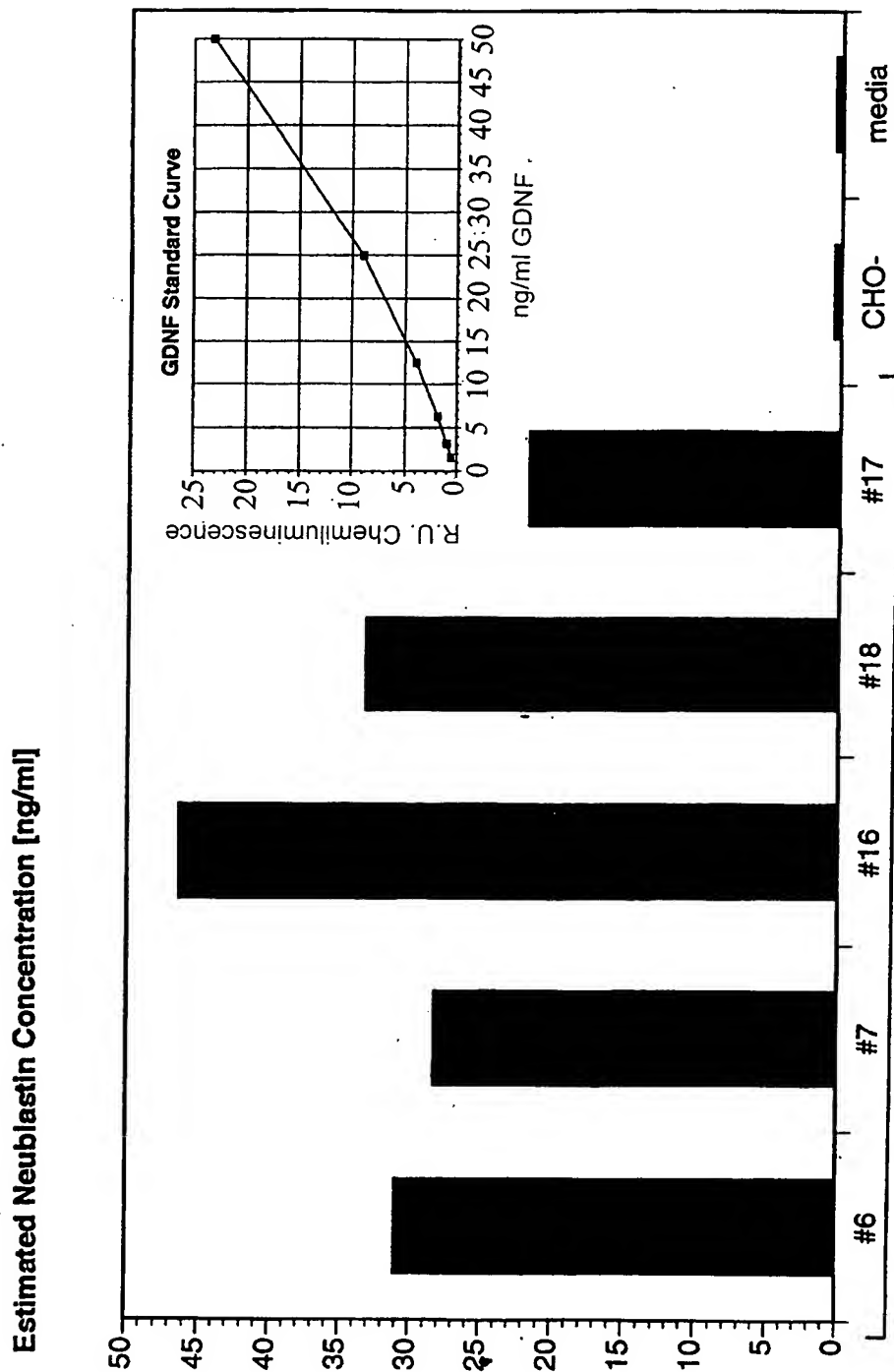


FIG. 9



**FIG. 10**  
CHO Neublastin Clones

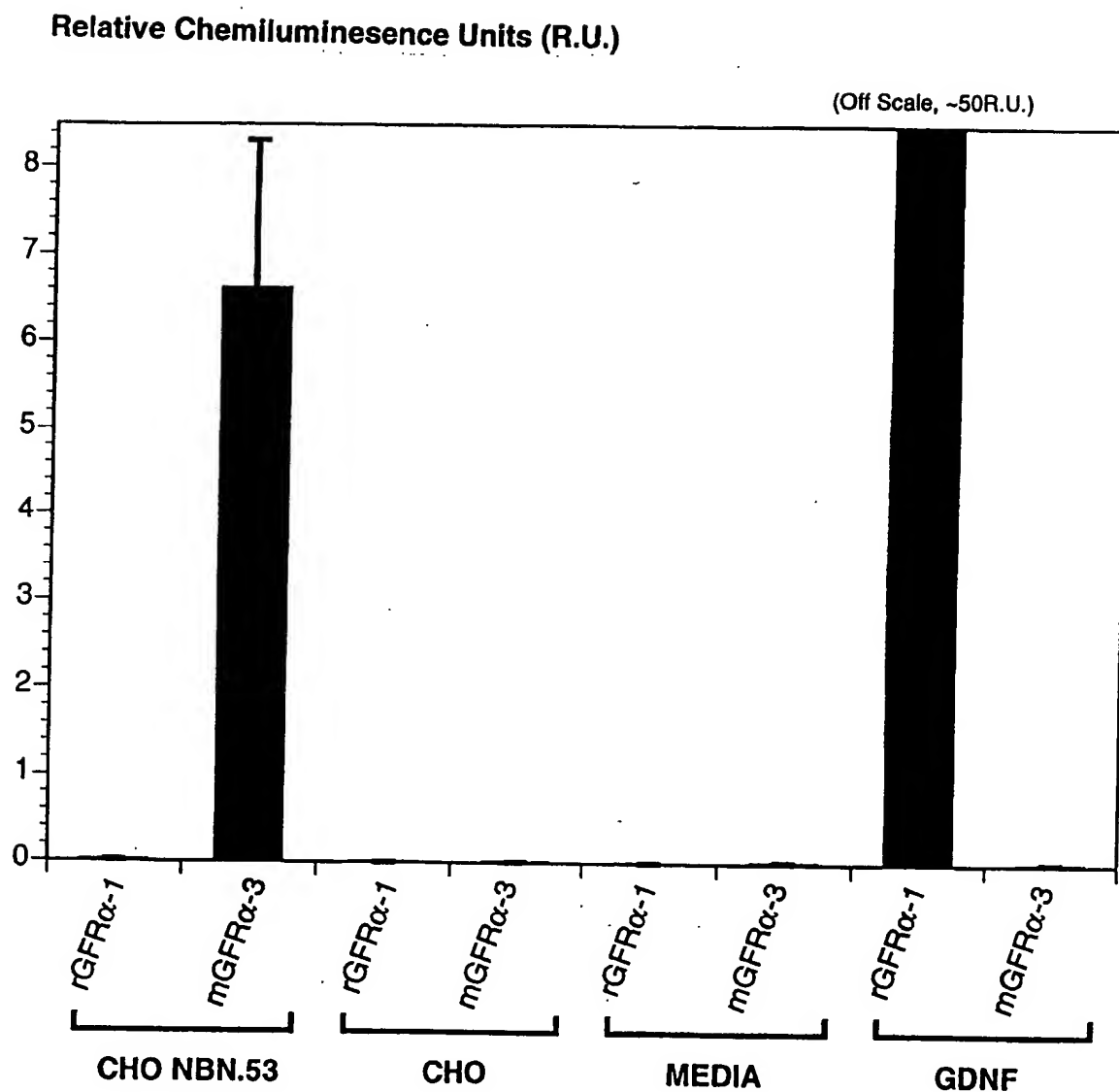
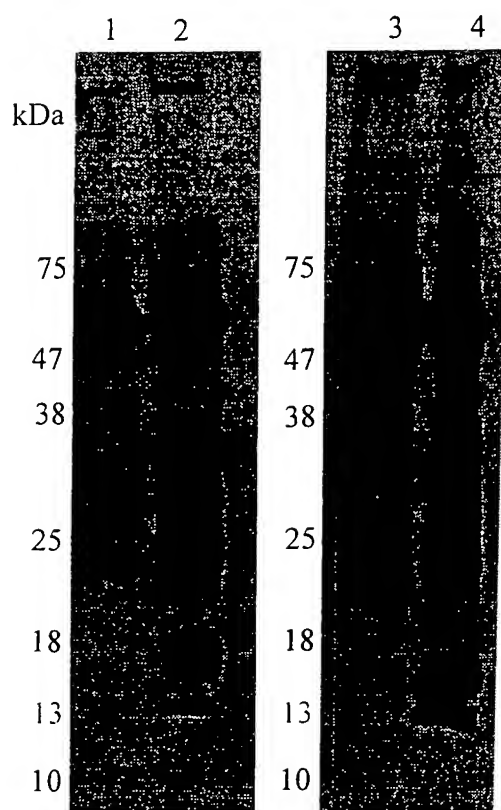
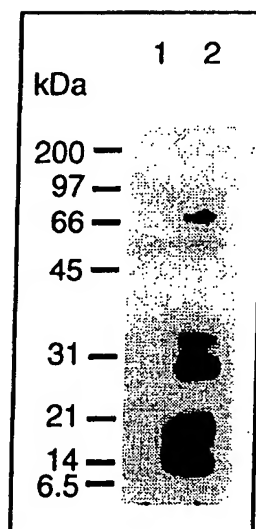


FIG. 11



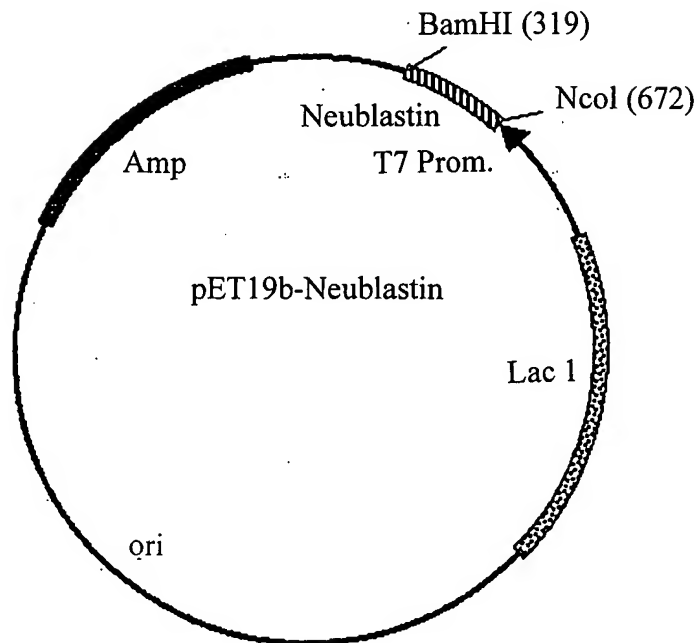
1. Control medium stained with R30 anti-peptide antibody
2. Neublentin containing conditioned medium stained with R30 anti-peptide antibody
3. Control medium stained with R31 anti-peptide antibody
4. Neublentin containing conditioned medium stained with R31 anti-peptide antibody

FIG. 12



Extraction of neublastin by affinity-binding on RETL3-Ig  
Lane 1: bound from CHO control conditioned media  
Lane 2: bound from neublastin overexpressing CHO conditioned media

FIG. 13



### Neublastin Syngene

NcoI (318)

```

316 TACCATGGCT GGAGGACCGG GATCTCGTGC TCGTGCAGCA GGAGCACGTG GCTGTCGTCT
    ATCCTACCGA CCTCCTGGCC CTAGAGCACG AGCACGTCGT CCTCGTGCAC CGACAGCAGA
    1▶ M A G G P G S R A R A A G A R G C R L

376 GCGTTCTCAA CTAGTGCCGG TGC GTGCACT CGGACTGGGA CACCGTTCCG ACGAACTAGT
    CGCAAGAGTT GATCACGGCC ACGCACGTGA GCCTGACCCT GTGGCAAGGC TGCTTGATCA
    19▶ R S Q L V P V R A L G L G H R S D E L V

436 ACGTTTTCTG TTTTGTTCAG GATCTTGTGC TCGTGCACGT TCTCCGCATG ATCTATCTCT
    TGCAAAAGCA AAAACAAGTC CTAGAACAGC AGCACGTGCA AGAGGCGTAC TAGATAGAGA
    39▶ R F R F C S G S C R R A R S P H D L S L

496 AGCATCTCTA CTAGGAGCCG GAGCACTAAG ACCGCCGCCG GGATCTAGAC CTGTATCTCA
    TCGTAGAGAT GATCCTCGGC CTCGTGATTG TGGCGGCGGC CCTAGATCTG GACATAGAGT
    59▶ A S L L G A G A L R P P P G S R P V S Q

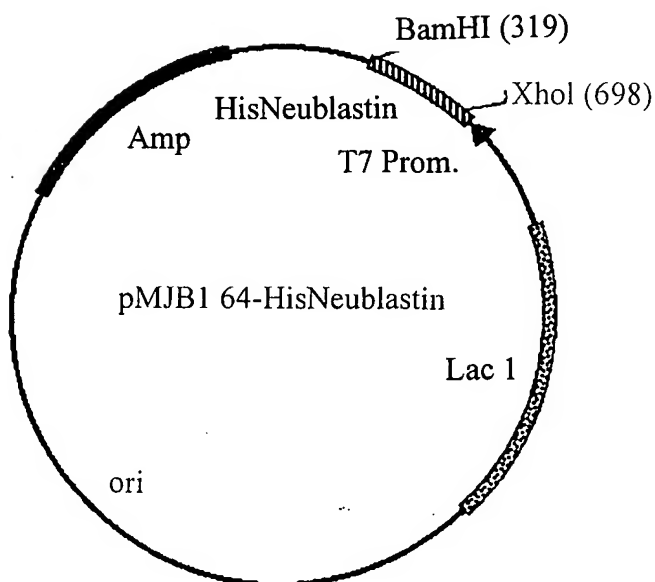
556 ACCTTGTTGT AGACCTACTA GATACGAAGC AGTATCTTTC ATGGACGTAA ACTCTACATG
    TGGAACAACA TCTGGATGAT CTATGCTTCG TCATAGAAAG TACCTGCATT TGAGATGTAC
    79▶ P C C R P T R Y E A V S F M D V N S T W

616 GAGAACCGTA GATAGACTAT CTGCAACCGC ATGTGGCTGT CTAGGATGAT AATAGGGATC
    CTCTTGGCAT CTATCTGATA GACGTTGGCG TACACCGACA GATCCTACTA TTATCCCTAG
    99▶ R T V D R L S A T A C G C L G . . .

676 CGGCT
    GCCGA
    
```

BamHI (671)

FIG. 14



### HisNeublastin

XhoI (340)

301	TACCATGGGC	CATCATCATC	ATCATCATCA	TCATCATCAC	TCGAGCGGCC	ATATCGACGA
	ATCCTACCCG	G TAGTAGTAG	TAGTAGTAGT	AGTAGTAGTG	AGCTCGCCGG	TATAGCTGCT
	1▶	M G H H H	H H H H	H H H	S S G	H I D D
361	CGACGACAAG	GCTGGAGGAC	CGGGATCTCG	TGCTCGTGCA	GCAGGAGCAC	GTGGCTGTGC
	3CTGCTGTTC	CGACCTCCTG	GCCCTAGAGC	ACGAGCACGT	CGTCCTCGTG	CACCGACAGC
	19▶	D D K A G G	P G S R	A R A	A G A	R G C R
421	TCTGCGTTCT	CAACTAGTGC	CGGTGCGTGC	ACTCGGACTG	GGACACCGTT	CCGACGAACT
	AGACGCAAGA	GTTGATCACG	GCCACGCACG	TGAGCCTGAC	CCTGTGGCAA	GGCTGCTTGA
	39▶	L R S Q L V	P V R A	L G L	G H R	S D E L
481	AGTACGTTTT	CGTTTTTGTT	CAGGATCTTG	TCGTCGTGCA	CGTTCTCCGC	ATGATCTATC
	TCATGCAAAA	GCAAAAACAA	GTCCTAGAAC	AGCAGCACGT	GCAAGAGGCG	TACTAGATAG
	59▶	V R F R F C	S G S C	R R A	R S P	H D L S
541	TCTAGCATCT	CTACTAGGAG	CCGGAGCACT	AAGACCGCCG	CCGGGATCTA	GACCTGTATC
	AGATCGTAGA	GATGATCCTC	GGCCTCGTGA	TTCTGGCGGC	GGCCCTAGAT	CTGGACATAG
	79▶	L A S L L G	A G A L	R P P	P G S	R P V S
601	TCAACCTTGT	TGTAGACCTA	CTAGATACGA	AGCAGTATCT	TTCATGGACG	TAAACTCTAC
	AGTTGGAACA	ACATCTGGAT	GATCTATGCT	TCGTCATAGA	AAGTACCTGC	ATTTGAGATG
	99▶	Q P C C R P	T R Y E	A V S	F M D	V N S T
661	ATGGAGAACC	G TAGATAGAC	TATCTGCAAC	CGCATGTGGC	TGTCTAGGAT	GATAATAGGG
	TACCTCTTGG	CATCTATCTG	ATAGACGTTG	GCGTACACCG	ACAGATCCTA	CTATTATCCC
	119▶	W R T V D R	L S A T	A C G	C L G	• •
721	ATCCGGCTGC	TAACAAAGCC	CG			
	TAGGCCGACG	ATTGTTTCGG	GC			

BamHI (719)

FIG. 15



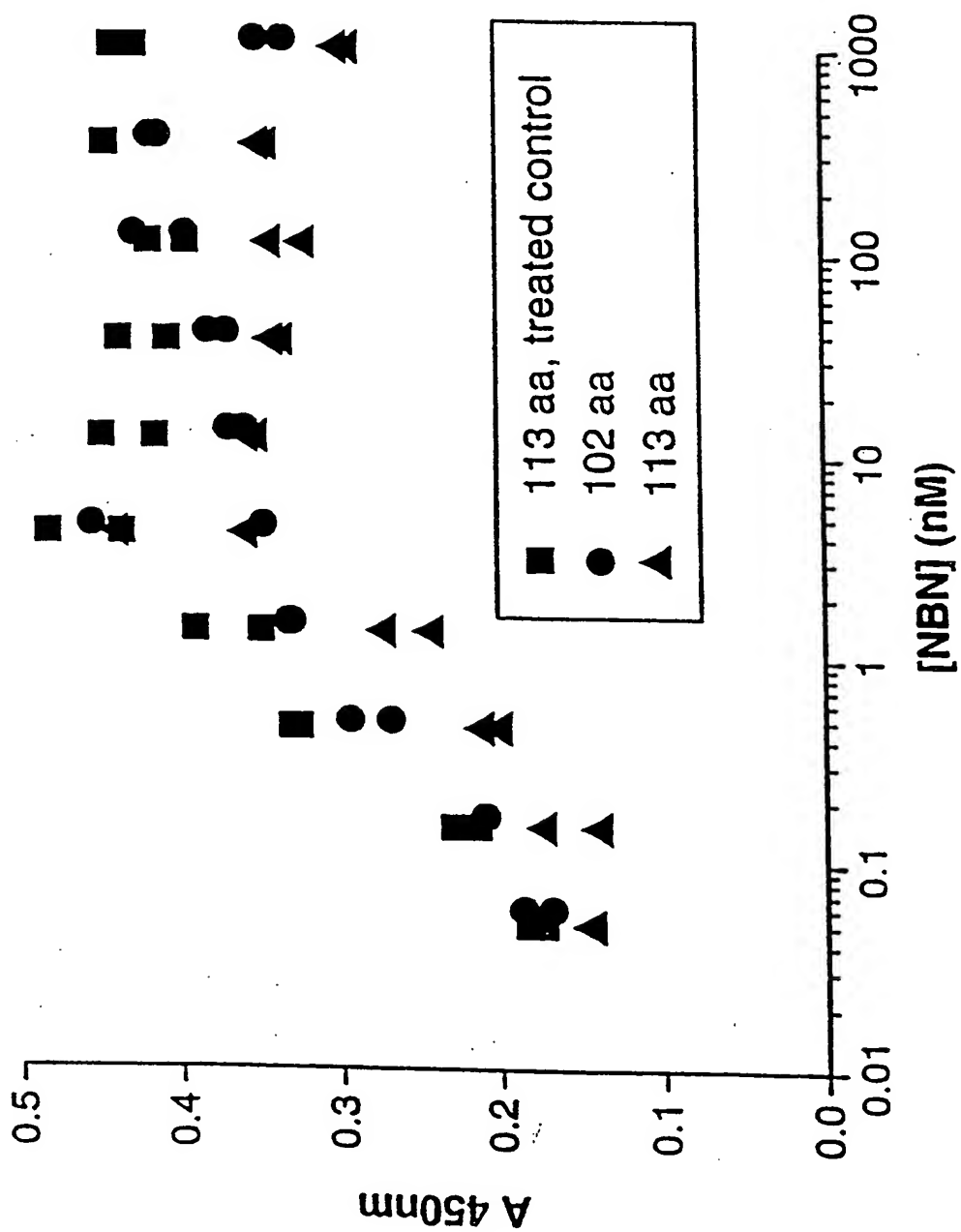


FIG. 16

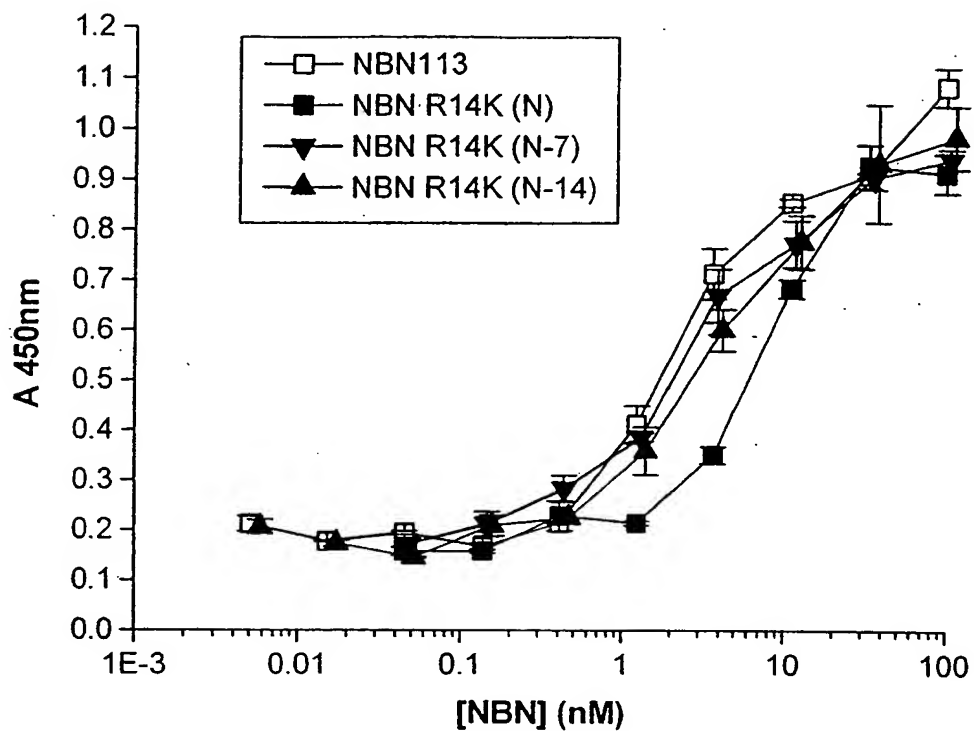


FIG. 17

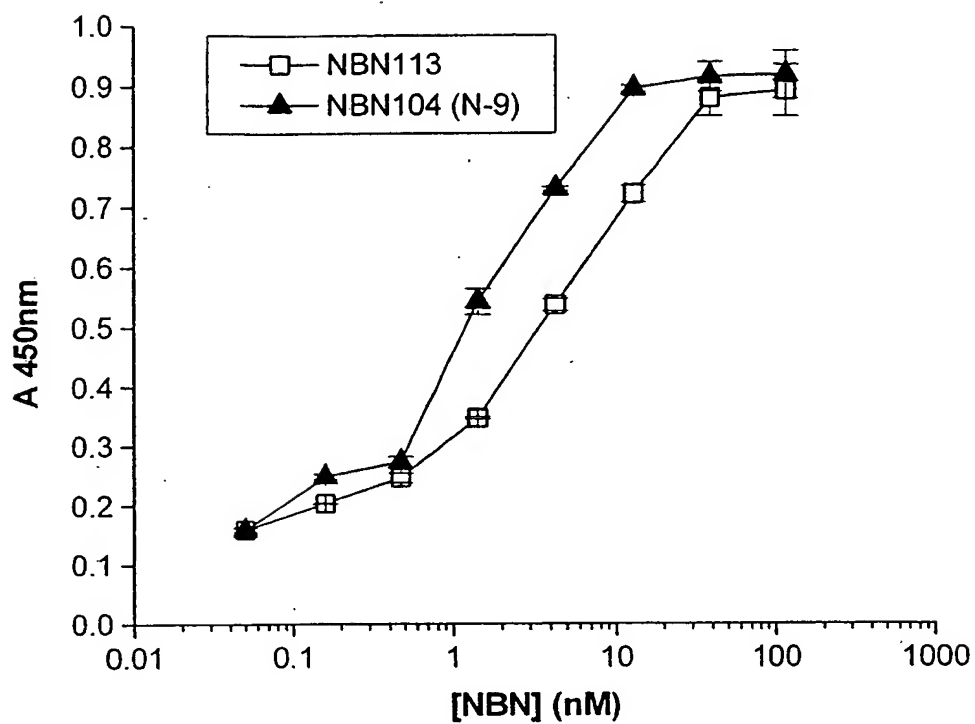


FIG. 18